Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): ~~A system~~ A line card of a router including a queue, the queue comprising:

a distributor;

one or more storage elements for storing a data structure, the data structure including a plurality of sub-data structures with each of said sub-data structures capable of storing a plurality of stored items of a plurality of items; and

a receiver;

wherein the distributor is configured to distribute the plurality of items to be added to the data structure among the plurality of sub-data structures in a predetermined sequence order defined among the plurality of sub-data structures and including each of the plurality of sub-data structures; and the receiver is configured to receive the items from the plurality of sub-data structures in the sequence order such that the plurality of items are received by the receiver from the data structure in a first-in the data structure, first-out the data structure order.

Claim 2 (currently amended): The ~~system~~ line card of claim 1, wherein each of the sub-data structures includes a linked-list data structure configured for storing items of the plurality of stored items.

Claim 3 (currently amended): The ~~system~~ line card of claim 2, ~~comprising~~ wherein the queue comprises a storage for storing a head and a tail of the linked list data structure of each of the plurality of sub-data structures.

Claim 4-12 (canceled)

Claim 13 (currently amended): ~~A system~~ A line card of a router including a queue, the queue comprising:

one or more storage elements for storing a plurality of data structures, each of the plurality of data structures including a plurality of sub-data structures capable of storing a plurality of stored pieces of a plurality of pieces of information;

a storage selector configured to select among the plurality of data structures for a particular piece of the plurality of pieces of information;

a distributor; and

a receiver;

wherein the distributor is configured to distribute each of the plurality of pieces of the information to be added to a particular one of the plurality of data structures across the plurality of sub-data structures belonging to the particular one of the plurality of data structures in a predetermined sequence order defined across the plurality of sub-data structures and including each of the plurality of sub-data structures; and the receiver is configured to receive the items from the plurality of sub-data structures in the sequence order such that the plurality of pieces of information are received by the receiver from the particular one of the plurality of data structures in a first-in the particular one of the plurality of data structures, first-out the particular one of the plurality of data structures order.

Claim 14 (currently amended): The ~~system~~ line card of claim 13, wherein each of the sub-data structures includes a linked-list data structure configured for storing pieces of information of the plurality of pieces of information.

Claim 15 (currently amended): The ~~system~~ line card of claim 14, ~~comprising~~ wherein the queue comprises a storage for storing a head and a tail of the linked list data structure of each of the plurality of sub-data structures.

Claims 16-22 (canceled)

Claim 23 (currently amended): A method performed by a single appliance, the method comprising:

(a) receiving a particular piece of information of a stream of pieces of information to be added to a queue, the queue including a plurality of sub-queues with each of capable of storing a plurality of pieces of information in the stream of pieces of information;

(b) adding the particular piece of information to a currently selected one of the plurality of sub-queues to which to add information;

(c) advancing the currently selected one of the plurality of sub-queues to which to add information to a next one of the plurality of the sub-queues to which to add information in a predetermined order among the plurality of sub-queues independent of the stream of information;

(d) removing information from a currently selected one of the plurality of sub-queues to which to remove information;

(e) advancing the currently selected one of the plurality of sub-queues to which to remove information to a next one of the plurality of sub-queues to which to remove information in the predetermined order; and

repeatedly performing steps (a)-(c) to add information to the queue and steps (d)-(e) to remove information from the queue such that pieces of information of the stream of pieces of information are added to queue and removed from the queue in the same order.

Claims 24-28 (canceled)

Claim 29 (currently amended): The ~~system~~ line card of claim 1, wherein the sequence order is a round robin order among the plurality of sub-data structures.

Claim 30 (currently amended): The ~~system~~ line card of claim 29, wherein the distributor includes a counter configured to identify the sequence order.

Claim 31 (currently amended): The ~~system~~ line card of claim 13, wherein the sequence order is a round robin order among the plurality of sub-data structures.

Claim 32 (currently amended): The ~~system~~ line card of claim 31, wherein the distributor includes a counter configured to identify the sequence order.

Claim 33 (currently amended): A queue for storing items of a stream of information with said items received in a particular order, the queue being implemented by a single apparatus, the queue comprising:

a plurality of sub-queues, each of the plurality of sub-queues capable of storing a plurality of items;

an enqueue distributor configured to receive said items of the stream of information in said particular order, and configured to distribute said items to the plurality of sub-queues in a predetermined sequence order among the plurality of sub-queues such that each of said items are only stored in a single one of the plurality of sub-queues; and

a dequeue receiver configured to only receive said items of the stream of information from the plurality of queues in the predetermined sequence order and to forward said items in said particular order.

Claim 34 (previously presented): The queue of claim 33, wherein said items correspond to packets.

Claim 35 (currently amended): The ~~system~~ line card of claim 1, wherein the distributor is configured to said distribute the plurality of items among the plurality of sub-data structures without regard to the content of items of the plurality of items.

Claim 36 (currently amended): The ~~system~~ line card of claim 1, wherein said items correspond to packets.

Claim 37 (currently amended): The ~~system~~ line card of claim 13, wherein the distributor is configured to said distribute the plurality of pieces of the information among the plurality of sub-data structures without regard to the content of piece of the plurality of pieces of the information.

Claim 38 (currently amended): The ~~system~~ line card of claim 13, wherein said pieces of information correspond to packets.

Claim 39 (previously presented): The method of claim 23, wherein the predetermined order among the plurality of sub-queues is a round robin order among the plurality of sub-queues.

Claim 40 (previously presented): The method of claim 23, wherein said pieces of information correspond to packets.

Claim 41 (currently amended): The ~~system~~ queue of claim 33, wherein the predetermined sequence order is a round robin order among the plurality of sub-queues.

Claim 42 (currently amended): The ~~system~~ queue of claim 41, wherein the enqueue distributor includes a counter for use in identifying the predetermined sequence order.

Claim 43 (currently amended): The ~~system~~ queue of claim 33, wherein the enqueue distributor is configured to said distribute the plurality of items among the plurality of sub-queues without regard to the content of items of the plurality of items.

Claims 44-47 (canceled)

Claim 48 (currently amended): A queue for storing items of a stream of information with said items received in a particular order, the queue being implemented by a single apparatus, the queue comprising:

a plurality of sub-queues, each of the plurality of sub-queues capable of storing a plurality of items;

means for receiving said items of the stream of information in said particular order, and for distributing said items to the plurality of sub-queues in a predetermined sequence order among the plurality of sub-queues such that each of said items are only stored in a single one of the plurality of sub-queues, wherein items distributed to a sub-queue are stored in the sub-queue; and

means for retrieving said items of the stream of information from the plurality of queues in the predetermined sequence order and for forwarding said items in said particular order.

Claim 49 (previously presented): The queue of claim 48, wherein said items correspond to packets.

Claim 50. (previously presented): The queue of claim 48, wherein the sequence order among the plurality of sub-queues is predetermined and independent of the content of said items of the stream of information.

Claim 51 (previously presented): The queue of claim 50, wherein the predetermined order is a round robin among the plurality of sub-queues.